

Patent Application  
Docket no.: ATS/0100-aAPC/DIV I

**Amendment**

In the Claims. Please amend claims 1, 2, 6, and 7, cancel claims 4, 5, 9, and 11, and add new claims 12-15, as follows:

1. (currently amended) An artificial antigen presenting cell, comprising:
  - a) a liposome comprising a lipid bilayer, wherein the lipid bilayer is comprised of neutral phospholipids and cholesterol;
  - b) at least one GM-1 ganglioside molecule disposed in the lipid bilayer;
  - c) ~~at least a portion of a cholera toxin  $\beta$  subunit bound to associated with~~ a GM-1 ganglioside molecule;
  - d) an ~~immunologically active~~ MHC component loaded with an antigen, wherein the antigen-loaded MHC component is bound to ~~associated with~~ the cholera toxin  $\beta$  subunit; and
  - e) an accessory molecule that can stabilize an interaction between a T cell receptor and the antigen-loaded MHC component.
2. (currently amended) An artificial antigen presenting cell according to claim 1 having a plurality of GM-1 ganglioside molecules, wherein a portion of the GM-1 ganglioside molecules form rafts in the lipid bilayer of the liposome.
3. (previously presented) An artificial antigen presenting cell according to claim 2 wherein said rafts are present in said lipid bilayer at high density.
4. (canceled)
5. (canceled)
6. (currently amended) An artificial antigen presenting cell, comprising:

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- a) a liposome comprising a lipid bilayer, wherein the lipid bilayer is comprised of neutral phospholipids and cholesterol;
  - b) at least one GM-1 ganglioside molecule disposed in the lipid bilayer;
  - c) ~~at least a portion of~~ a cholera toxin  $\beta$  subunit bound to ~~associated with~~ a GM-1 ganglioside molecule;
  - d) at least one tetraavidin molecule bound to ~~associated with~~ the cholera toxin  $\beta$  subunit ~~lipid bilayer~~;
  - e) ~~an immunologically active~~ a biotinylated MHC component loaded with an antigen, wherein the biotinylated MHC component loaded with antigen is ~~associated with~~ bound to the tetraavidin molecule of (d) ~~cholera toxin  $\beta$  subunit~~; and
  - f) ~~an~~ a biotinylated accessory molecule that can stabilize an interaction between a T cell receptor and the antigen-loaded MHC component, wherein the biotinylated accessory molecule is bound to ~~associated with~~ a the tetraavidin molecule of (d).
7. (currently amended) An artificial antigen presenting cell according to claim 6 having a plurality of GM-1 ganglioside molecules, wherein a portion of the GM-1 ganglioside molecules form rafts in the lipid bilayer of the liposome.
8. (previously presented) An artificial antigen presenting cell according to claim 7 wherein said rafts are present in said lipid bilayer at high density.
9. (canceled)
10. (previously presented) An artificial antigen presenting cell according to claim 8 further comprising irrelevant molecules selected from the group consisting of molecules for binding said artificial antigen presenting cells to a solid support, and a label.
11. (canceled)

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12. (new) An artificial antigen presenting cell according to claim 1 wherein the neutral phospholipids are phosphatidylcholine.
13. (new) An artificial antigen presenting cell according to claim 6 wherein the neutral phospholipids are phosphatidylcholine.
14. (new) An artificial antigen presenting cell according to claim 1 wherein the lipid bilayer is a fluid lipid bilayer.
15. (new) An artificial antigen presenting cell according to claim 1 wherein the lipid bilayer is a fluid lipid bilayer.